

Appl. No. 09/674,648  
Amdt. dated October 31, 2008  
Reply to Office action of September 13, 2007

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Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A method for the manufacture of a cam shaft from a tube, the cam shaft having bearer rings attached thereto, the method comprising the following steps:

placing bearer rings, produced in a separate method and in correspondence with prospective locations of hollow cams on said cam shaft, in a high internal pressure forming tool together with the tube to be formed and subjected to the action of axial forces and a medium under high internal pressure, whereby the bearer rings are attached by expansion of the tube in a frictional and interlocking manner, each of the bearer rings having an outer surface and an inner surface, the radial thickness between the outer and inner surfaces being equal completely around the tube, and the necessary hardness, strength and wear resistance, and being formed in a separate method;

upsetting regions by kneading, swaging, or stretching that lie at the ends of the tube outside the regions in which the cams are seated so as to be in a first method step prior to said high internal pressure forming, regions that lie outside the regions in which the cams are seated are so kneaded and/or upset that same are increased in thickness and/or are stretched to form drive or control different functional elements; whereby the shaft has all cams in form and in position on a single piece and by expansion or tapering the original diameter of the tube possesses bearing faces, drive and/or control elements and internal and/or external screw threads.

placing the tube and the bearer rings in a high internal pressure forming tool; applying axial forces to the ends of the tube while applying a medium under a high internal pressure to the tube, whereby the tube is expanded in defined regions to form the hollow cams from the material of the tube and whereby the bearer rings are attached to the hollow tube cams in a frictional and interlocking manner by

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expansion of the tube

Claims 2 (canceled)

Claim 3 (previously presented): The method as set forth in claim 1, characterized in that between the cam shaft ends in a step prior to internal high pressure forming bearing faces and the eventual region where the cams are to be seated, are produced by round kneading and by reducing the diameter in this part to the desired size.

Claim 4 (currently amended): The method as set forth in claim 1 or in claim 2, characterized in that between the cams bearing faces are produced by internal high pressure forming by expanding the tube.

Claim 5 (previously presented): The method as set forth in claim 1, characterized in that the bearer rings are hardened in a known manner prior to being placed in the internal high pressure forming tool.

Claims 6 - 18 (canceled)